

UNIVERSAL INTERFACE SIMULATING MULTIPLE INTERFACE PROTOCOLS

ABSTRACT OF THE DISCLOSURE

A universal interface interfaces between a variety of different data processing devices by the generation, storage, proper routing, and timed output of data signals to simulate behavior of a traditional interface device dedicated to that particular communications protocol. The interface is universal because it is easily reconfigured to interface a general purpose processor with a number of communications devices, despite contrasting interface protocols, pin configuration, and other characteristics. Initially, the controller receives identification of a peripheral device's particular communications protocol. As for its input function, the controller responds to input data signals upon input/output pads by routing the signals into memory and later downloading the signals from memory under prescribed timing. As for its output function, the controller generates converted data signals complying with the peripheral's communications protocol, stores the converted data signals in the memory, and directs the memory to output the converted data signals with prescribed timing to simulate behavior of a traditional interface device dedicated to the selected communications protocol.